<div align="center">**REMARKS**</div>

Claims 1-75 are currently pending in the subject application and are presently under consideration. Claims 1-11, 13-23, 25, 27-35, 37-40, 42-50, 52-53, 55-58, 60-64, 66, 70-71, and 73-75 have been amended, and claim 26 has been cancelled as shown on pages 2 to 13 of the Reply. Applicants' representative thanks the Examiner for the courtesies extended during the telephonic interview conducted on June 13, 2007, for the subject application, where it was indicated that the claims as currently amended overcome the rejection under 35 U.S.C. §112, and the amended claims may also define over the cited references.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I.   Rejection of Claims 1-75 Under 35 U.S.C §112, First Paragraph

Claims 1-75 stand rejected under 35 U.S.C §112, first paragraph, as failing to comply with the enablement requirement. The Examiner contends that the claims contain "subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention." (*See* Office Action dated April 4, 2007). Though many of the claims have been amended, this enablement rejection is improper at least because the Examiner has offered no other reasoning for the rejection. The Manual for Patent Examining Procedure (MPEP) §2164.04 provides that "specific technical reasons are always required," in making an enablement rejection. After such reasons are offered, applicants can effectively respond to the rejection. However, the rejection as it stands in the Office Action does not follow the principles of compact prosecution by setting forth all evidence, reasons, and issues such to offer the applicants a reasonable opportunity to respond to the rejection sufficiently for withdrawal thereof.

With the foregoing in mind, applicants' disagree with the Examiners contention that the claims fail to meet the enablement requirement for at least the following reasons. The claims as amended present matter that is present and sufficiently described in the Specification and do so without failing to interrelate necessary elements defined in the

various embodiments in the Specification; accordingly, this rejection should be withdrawn.

II.   Rejection of Claims 1-75 Under 35 U.S.C §112

Claims 1-75 stand rejected under 35 U.S.C. §112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants' representative would like to point out that this rejection is improper for claims as filed as indicated by the Federal Circuit in *In re Moore*, 439 F.2d 1232. Therein, the court stated, in referring to claims as filed, that "[t]he subject matter there set out must be presumed, in the absence of evidence to the contrary, to be that 'which the applicant regards as his invention.'"

Additionally, the claims have been amended herein and, though applicants' representative respectfully disagrees that the original claims failed to point out and distinctly claim the matter applicants regard as the invention, the claims as amended fulfill this requirement. Accordingly, this rejection should be withdrawn.

III.   Rejection of Claims 1-12, 33-52, 66-68, and 70-75 Under 35 U.S.C. §102(e)

Claims 1-12, 33-52, 66-68, and 70-75 stand rejected under 35 U.S.C. §102(e) as being anticipated by Buford, *et al.* (US 2003/0041126). Though the Examiner originally did not indicate that claims 33-41 were rejected, the analysis provided by the Examiner in the Office Action suggests otherwise. Therefore, applicants' representative assumes the Examiner has rejected claims 33-41 as well under this section. It is respectfully requested that this rejection be withdrawn for at least the following reason. Buford, *et al.* fails to disclose or suggest each and every element recited in the subject claims.

> For a prior art reference to anticipate, 35 U.S.C. §102 requires that "***each and every element*** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)) (emphasis added).

The subject matter as claimed relates to detecting spam e-mail messages; in particular, the features of origination information can be analyzed for consistency to evaluate the integrity of the e-mail. When an e-mail is sent, a variety of protocols are utilized having various headers and information relating to the origin of the e-mail; this information can be evaluated to determine validity of values (or features) throughout. For example, an IP address feature can be checked against a domain name feature to discover if the domain is in the appropriate address or range of addresses. If not, inconsistency between this pair of features can indicate spam, alternatively, the inconsistency can be a result of misconfiguration of an e-mail server/client and can be populated in a trained spam filter to indicate that the inconsistency is not itself indicative of spam if desired. To this end, claim 1 as amended recites *a message parsing component that identifies features relating to at least a portion of origination information of a message, and a feature pairing component that* **combines the features into useful pairs, the features of the pairs are evaluated for consistency with respect to one another to determine if the message is spam**. Claims 33, 66, 70, and 73 recite similar features; however, Buford, *et al.* fails to disclose or suggest such claimed aspects.

Buford, *et al.* relates to reporting customer e-mail complaints for unsolicited commercial e-mails. In particular, Buford, *et al.* appears to disclose a system that receives a complaint of an unsolicited commercial e-mail by e-mail notification from the customer and breaks the e-mail into a plurality of headers and bodies. Typically, the innermost header is evaluated by the system as this is likely the original unsolicited e-mail. Information regarding the e-mail can be stored, such as IP address, and validated for subsequent reporting. However, Buford, *et al.* fails to disclose or suggest *combining the features into useful pairs, the features of the pairs are evaluated for consistency with respect to one another to determine if the message is spam*.

On the contrary, Buford, *et al.* isolates information in the message for storage and subsequent reporting or data access. To this end, the values are input into a database, for example, such that they are isolated into cells and are, thus, not combined into pairs as recited in the subject claims. Additionally, the values of Buford, *et al.* are not evaluated to determine if a message is spam as recited in the claims; rather the message in Buford,

et al. has already been identified as spam by the user and reported to a complaint system. Thus, no determination is made regarding spam in Buford, *et al.*

Accordingly, Buford, *et al.* fails to disclose or suggest each and every element as recited in claims 1, 33, 66, 70, and 73. Therefore, rejection of these claims, as well as claims 2-12, 34-41, 67-68 and 71-72, which depend therefrom, should be withdrawn.

Additionally, claim 42 recites similar aspects as well as *using the pairs of features to train a machine learning spam filter **regarding acceptable or unacceptable pairs, and detecting a spam e-mail based at least in part on comparing one or more pairs of features in the e-mail to at least one pair in the machine learning spam filter***. As shown *supra*, Buford, *et al.* does not disclose or suggest detecting spam e-mail; rather the e-mail has already been indicated as spam by the complainant. Moreover, Buford, *et al.* does not disclose or suggest detecting such according to comparing pairs of features of the e-mail to those of a machine learning spam filter. Accordingly, rejection of claim 42 as well as claims 43-52, which depend therefrom, should be withdrawn.

Furthermore, Buford, *et al.* does not disclose each and every element recited in claim 74. Independent claim 74, as amended, recites in part ***means for training a machine learning filter on spam indicative features using at least a portion of the created features***. Buford, *et al.* does not disclose training a machine learning filter. Moreover, applicants' representative notes that the Examiner has provided no reasoning or justification for rejection of claims 74-75 (and claim 73); for at least the foregoing reasons, rejection of these claims should be withdrawn.

IV.   Rejection of Claims 13-28, 30-32, 53-65 and 69 Under 35 U.S.C. §102(e)

Claims 13-28, 30-32, 53-65 and 69 stand rejected under 35 U.S.C. §102(e) as being anticipated by Hearnden (US 6,768,991). Though the Examiner indicated claim 33 is rejected under this section as well as the previous section, applicants' representative believes this was in error (in view of the Examiner's subsequent analysis) and claim 33 is only rejected in the previous section. Therefore, this analysis does not include reference to claim 33. It is respectfully requested that this rejection be withdrawn for at least the following reason. Hearnden fails to disclose or suggest each and every element recited in the subject claims.

> For a prior art reference to anticipate, 35 U.S.C. §102 requires that "*each and every element* as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)) (emphasis added).

The subject matter as claimed relates to detecting spam e-mail messages; in particular, the features of a message can be analyzed for runs of characters indicative of spam. The run need not occur as sequential characters; rather the feature can be grouped according to a number of characters and the feature checked for existence of a run regardless of whitespace or extraneous characters intended to throw off modern spam filters. Moreover, certain runs can be analyzed to indicate abnormal sequences of letters or characters that may be indicative of spam. To this end, claim 13 as amended recites *a feature generating component that generates features relating to the character sequences of any length, the features are analyzed to detect at least one of intentional character substitutions, insertions, or misspellings indicative of spam*. Claim 53 recites similar aspects. Hearnden fails to disclose such aspects as claimed.

Hearnden relates to a system for identifying characters in an e-mail. Specifically, Hearnden utilizes a modified Boyer-Moore searching algorithm to facilitate this end, which entails evaluating the strings for which to search. The system reads the message advancing by the length of the shortest search string. The system then looks at the resulting character and builds a table of positions to check with respect to the search strings. This process continues jumping forward no more than the smallest search string length until the message is read. However, Hearnden does not disclose or suggest *the features are analyzed to detect at least one of intentional character substitutions, insertions, or misspellings indicative of spam*.

Conversely, Hearnden is only concerned with finding certain sequences of characters; thus character substitutions, insertions, misspellings, or other deformities used to combat modern spam filters would not be caught by the Hearnden system. However, the applicants' claims recite detecting such deformities for features relating to character sequences. For at least this reason, Hearnden fails to disclose each and every element

recited in claims 13 and 53. Moreover, claim 53 recites training a machine learning filter which is also not contemplated by Hearnden. Therefore, rejection of claims 13 and 53, as well as claims 14-24, 54-65, and 69, which depend therefrom, should be withdrawn.

Additionally, claim 25 recites *a feature generating component that generates features corresponding to the instances of random character strings* **to facilitate determining an entropy measurement for each string, the entropy measurement is used to indicate the message as being spam or not spam**. Hearnden does not disclose or suggest making any measurement; rather Hearnden, as mentioned, merely searches for definite sequences of characters. Applicants' claims, on the other hand, can calculate an entropy measurement related to the randomness of the string; if the string is passed a threshold entropy, for example, the message can be indicated as spam. Hearnden does not disclose or suggest such aspects.

For at least the foregoing reasons, Hearnden additionally fails to disclose or suggest all elements recited in claim 25. Accordingly, rejection of claim 25, as well as claims 26-28 and 30-32, which depend therefrom, should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP438US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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